WHAT IS CLAIMED IS:

1. A method of preventing or inhibiting an indication or disease associated with aberrant, pathogenic or undesirable antibody production which is specific for a particular antigen, comprising: administering to a mammal afflicted with, or at risk of, the indication or disease a dosage form comprising an amount of at least one epitope peptide, a variant thereof or a combination thereof, effective to prevent or inhibit at least one symptom of said indication or disease, wherein the sequence of the epitope peptide comprises an immunodominant epitope sequence and wherein the peptide comprises less than the sequence of the antigen, and wherein the antigen comprises said immunodominant epitope sequence.

2. A method of preventing or inhibiting an indication or disease associated with aberrant, pathogenic or undesirable antibody production which is specific for a particular antigen, comprising: administering to a mammal afflicted with, or at risk of, the indication or disease a dosage form comprising an amount of at least one epitope peptide, a variant thereof or a combination thereof, effective to suppress, tolerize or inhibit the priming or activity of, T cells of said mammal, wherein the T cells are specific for the antigen, wherein the sequence of the epitope peptide comprises an immunodominant epitope sequence, wherein the peptide comprises less than the sequence of the antigen, and wherein the antigen comprises the immunodominant epitope sequence.

3. The method of claim 1 wherein the administration is effective to reduce or inhibit the amount of said antibody or the affinity of said antibody for an antigen comprising said peptide.

4. The method of claim 1 or 3 wherein the antigen is an endogenous antigen.

89

5. The method of claim 4 wherein the endogenous antigen is the acetylcholine receptor, insulin, growth hormone, factor VIII or factor IX

6. The method of claim 1 or 3 wherein the antigen is an exogenous antigen.

7. The method of claim 6 wherein the exogenous antigen is a fungal antigen.

8. The method of claim 2 wherein the administration is effective to reduce or inhibit the amount of said antibody or the affinity of said antibody for an antigen comprising said peptide.

9. The method of claim 2 or 8 wherein the antigen is an exogenous antigen.

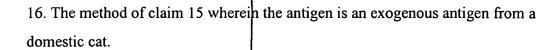10. The method of claim 9 wherein the exogenous antigen is a fungal antigen.

11. The method of claim 2 or 8 wherein the antigen is an endogenous antigen.

12. The method of claim 11 wherein the endogenous antigen is the acetylcholine receptor, insulin, growth hormone, factor VIII or factor IX.

13. The method of claim 1 or 2 wherein the mammal is a human.

14. The method of claim 13 wherein the peptide comprises a universal, immunodominant epitope sequence.

15. The method of claim 1 or 2 wherein the dosage form is administered to the respiratory tract.

16. The method of claim 15 wherein the antigen is an exogenous antigen from a domestic cat.

17. A method to tolerize a mammal to an antigen associated with aberrant, pathogenic or undesirable antibody production in the mammal, comprising: administering at least one epitope peptide, a variant thereof or a combination thereof, having a universal immunodominant epitope sequence to the mammal in an amount effective to tolerize the mammal to an antigen having said epitope, wherein the sequence of the epitope peptide comprises an immunodominant epitope sequence and wherein the peptide comprises less than the sequence of the antigen.
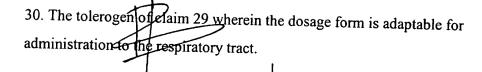
18. The method of claim 17 wherein the peptide is nasally administered.

19. A method to identify an immunodominant epitope sequence useful to tolerize a mammal, comprising:
(a) contacting a plurality of samples with a plurality of peptides, wherein the samples to be tested comprise T cells of a mammal, wherein each sample is contacted with a different peptide, and wherein the mammal is sensitized to an antigen comprising said peptide; and
(b) detecting or determining whether the T cells of the mammal in one sample proliferate relative to other samples and relative to T cells which were not exposed to a peptide.

20. A method to identify an immunodominant epitope sequence useful to tolerize a mammal, comprising:
(a) contacting a plurality of samples with a plurality of peptides, wherein the samples to be tested comprise T cells of a mammal, wherein each sample is contacted with a different peptide, and wherein the mammal is sensitized to an antigen comprising said peptide; and

91

(b) detecting or determining whether the T cells of the mammal in one sample proliferate relative to other samples and relative to T cells which were exposed to a peptide that does not comprise an immunodominant epitope peptide.

21. A method to identify a universal epitope sequence in a mammal, comprising:

(a) contacting at least two samples obtained from at least two mammals with a preselected peptide, wherein one sample comprises CD4+ cells obtained from a first individual mammal, wherein the second sample comprises CD4+ cells obtained from a second individual mammal, wherein the genotype of the second mammal at the immune response loci differs from the genotype of the first mammal, and wherein the mammals are of the same species; and

(b) detecting or determining whether the CD4+ cells of each mammal proliferate relative to CD4+ cells which were not contacted with the peptide.

22. A therapeutic method, comprising: administering to the respiratory tract of a mammal subjected to gene therapy which employs a recombinant virus as a delivery vehicle, an amount of an epitope peptide, a variant thereof or a combination thereof effective to suppress an immune response to the virus-specific proteins present in the delivery vehicle, wherein the epitope peptide comprises an immunodominant epitope sequence of the virus protein.

23. A therapeutic method, comprising: administering to the respiratory tract of a mammal having an indication or disease characterized by a decreased amount or a lack of an endogenous protein and which mammal is subjected to exogenous introduction of the endogenous protein or the corresponding recombinant polypeptide, an amount of an epitope peptide, a variant thereof or a combination thereof effective to suppress an immune response to the exogenously

introduced protein or polypeptide, wherein the indication or disease is associated with aberrant or pathogenic antibody production to the endogenous protein, and wherein the sequence of the epitope peptide comprises an immunodominant epitope sequence and wherein the peptide comprises less than the sequence of the endogenous protein which comprises the immunodominant epitope sequence.

24. A therapeutic method, comprising: administering to the respiratory tract of a mammal subjected to gene therapy which employs a recombinant virus as a delivery vehicle and which recombinant virus encodes an endogenous protein which said mammal is in need of, an amount of an epitope peptide, a variant thereof or a combination thereof effective to suppress an immune response to the encoded protein, wherein the peptide comprises an immunodominant epitope sequence of the endogenous protein, and wherein the sequence of the epitope peptide comprises less than the sequence of the endogenous protein.

25. The method of claim 23 or 24 wherein the disease is hemophilia or diabetes.

26. The method of claim 23 wherein the indication is adenosine deamidase deficiency, growth hormone deficiency, insulin deficiency, factor IX deficiency or factor VIII deficiency.

27. The method of claim 22 or 24 wherein the viral vector is a retroviral vector.

28. The method of claim 22 or 24 wherein the viral vector is an adenoviral vector.

29. A tolerogen comprising at least one isolated and purified peptide having an immunodominant epitope sequence, the administration of which to a sensitized mammal results in the suppression of the immune response of that mammal to an antigen which comprises at least an immunogenic portion of the peptide.

30. The tolerogen of claim 29 wherein the dosage form is adaptable for administration to the respiratory tract.

31. The method claim 1, 2, 17, 22, 23 or 24 wherein the administration does not increase synthesis of pathogenic antibody to the native antigen.

32. A method to inhibit or treat an antibody-mediated disease in a mammal, wherein the disease is characterized by antibodies specific for an antigen comprising:

(a) administering to the mammal a dosage form comprising an amount of at least one epitope peptide, a variant thereof or a combination thereof, effective to prevent or inhibit at least one symptom of said disease, wherein the sequence of the epitope peptide comprises an immunodominant epitope sequence, wherein the antigen comprises said immunodominant epitope sequence, and wherein the peptide comprises less than the sequence of the antigen which comprises said immunodominant epitope sequence; and

(b) subjecting the mammal to plasmapheresis.

33. The method of claim 32 further comprising administering an agent that inhibits B cell activation.

94